

Methylmercury Contamination of Laboratory Animal Diets

**Bernard Weiss, Sander Stern, Elsa Cernichiari,
and Robert Gelein**

doi:10.1289/ehp.7816 (available at <http://dx.doi.org/>)

Online 20 April 2005



Methylmercury Contamination of Laboratory Animal Diets

Bernard Weiss, Sander Stern, Elsa Cernichiari, Robert Gelein

Department of Environmental Medicine

University of Rochester School of Medicine and Dentistry

Rochester, NY 14642

Correspondence to:

Dr. Bernard Weiss
Department of Environmental Medicine
School of Medicine and Dentistry
Box EHSC, Rm G-6820
575 Elmwood Avenue
Rochester, NY 14642

Tel: 585-275-1736
Fax: 585-256-2591
e-mail: bernard_weiss@urmc.rochester.edu

1) Running title:

Methylmercury in Laboratory Diets

2) Key Words:

Methylmercury

Laboratory Diets

Animal feed

Rats

3) Acknowledgements:

Supported by National Institute of Environmental Health Sciences Center Grant ES-01247 and research grant ES-08109. We thank Marlene Balys and Margaret Langdon for technical assistance. The authors have no conflicts of interest to report.

4) Abbreviations:

Hg	mercury
mg/g	milligrams per gram
ng/g	nanograms per gram
ng/ml	nanograms per milliliter
PCB	polychlorinated biphenyl
PND	postnatal day
ppm	parts per million
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter

Outline of section headers:

ABSTRACT

INTRODUCTION

METHODS AND RESULTS

DISCUSSION

REFERENCES

ABSTRACT

In the midst of research focusing on the neurodevelopmental effects of mercury vapor in rats, we detected significant levels of mercury (30 - 60 ng/g) in the blood of non-exposed control subjects. We determined that the dominant form of the mercury was organic, and that the standard laboratory chow we used in our Vivarium was the source of the contamination. The dietary levels were deemed of potential biological significance, even though they might have fallen below the limits of measurement specified by the supplier. All investigators employing animals in research must assess such potential contamination, since dietary agents (1) may alter conclusions based on intentionally administered doses, (2) may alter outcomes by interacting with *other* agents that are the primary focus of the research, and (3) may alter outcomes of research unrelated to the toxic effects of experimentally-administered agents.